

### **ABSTRACT OF THE DISCLOSURE**

A digital communication system having an improved equalization performance according to a channel state and a method for operating the system are disclosed. The digital communication system includes: a channel state judging section; and an equalizing section for compensating for a channel distortion of the inputted signal by initializing a parameter on the basis of the judged channel state. The channel state judging section includes: a channel prediction section for predicting the channel state of the inputted signal by using the field sync; an N number of buffers for storing the state information regarding the N number of channels predicted by means of the N number of the field syncs; a calculating section for calculating a difference between the state information regarding the N number of channels stored in the N number of buffers; and a judging section for judging the channel state on the basis of the calculated difference.